

IN THE TITLE

Please amend the title of the invention to be --Catheter Systems and Associated Methods which Utilize Reduced Length Inner Conduit--.

IN THE CLAIMS

Please cancel claims 1-27.

Please add the following new claims 28-52.

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28. (New) A method of performing a medical procedure with a catheter system which includes (i) a guide catheter having a distal guide orifice, a proximal guide orifice, and a guide lumen extending therebetween, (ii) a tube segment having a distal tube orifice, a proximal tube orifice and a tube lumen extending therebetween, comprising the steps of:

(a) positioning the guide catheter within a body of a patient;

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(b) positioning the tube segment within the guide catheter after step (a) so that (i) the tube segment extends through the distal guide orifice, (ii) the proximal tube orifice is positioned within the guide lumen, and (iii) the distal tube orifice is positioned outside of the guide lumen; and

(c) advancing fluid into the body of the patient through the guide catheter and the tube segment after step (b).

29. (New) The method of claim 28, wherein:

step (a) includes the step of positioning the guide catheter so that the distal guide orifice is located within a blood vessel of the body; and

step (b) includes the step of positioning the tube segment within the guide catheter so that the distal tube orifice is positioned in direct contact with blood located in the blood vessel.

30. (New) The method of claim 29, wherein step (c) includes the step of infusing TPN into the blood vessel through the guide catheter and the tube segment.

31. (New) The method of claim 28, wherein (i) the tube segment is attached to a pusher, and (ii) the pusher is attached to a closure member, further comprising the step of:

(d) securing the closure member to the guide catheter prior to the advancing step.

32. (New) The method of claim 28, wherein:
said guide catheter includes a sideport branch which defines a sideport lumen, and
step (b) includes the step of advancing the tube segment through the sideport lumen and into the guide lumen.

33. (New) A catheter system, comprising:
a guide catheter having a distal guide orifice, a proximal guide orifice, and a guide lumen extending therebetween; and
a tube segment having a distal tube orifice, a proximal tube orifice and a tube lumen extending therebetween,
wherein said tube segment extends through said distal guide orifice,
wherein said proximal tube orifice is positioned within said guide lumen,
and
wherein distal tube orifice is positioned outside of said guide lumen.

34. (New) The catheter system of claim 33, further comprising:
a pusher attached to said tube segment; and
a closure member attached to said pusher, said closure member
configured to couple to said guide catheter.

35. (New) The catheter system of claim 34, wherein said pusher includes
an elongate plastic member having a distal end secured to said tube segment.

36. (New) The catheter system of claim 34, wherein said pusher includes
a metal wire having a distal end secured to said tube segment.

37. (New) The catheter system of claim 34, wherein said pusher
includes:

a swivel,
an upper pusher portion interposed between said closure member and
said swivel, and
a lower pusher portion interposed between said swivel and said tube
segment.

38. (New) The catheter system of claim 34, wherein:
said guide catheter includes a sideport branch which defines a sideport
lumen, and
said pusher is positioned within said sideport branch and said guide
lumen.

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39. (New) A method of performing a series of medical procedures with a catheter system which includes (i) a guide catheter having a distal guide orifice, a proximal guide orifice, and a guide lumen extending therebetween, (ii) an original tube segment having an original distal tube orifice, an original proximal tube orifice and an original tube lumen extending therebetween, and (iii) a replacement tube segment having a replacement distal tube orifice, a replacement proximal tube orifice and a replacement tube lumen extending therebetween, comprising the steps of:

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- (a) positioning the guide catheter within a body of a patient;
 - (b) positioning the original tube segment within the guide catheter after step (a) so that (i) the original tube segment extends through the distal guide orifice, (ii) the original proximal tube orifice is positioned within the guide lumen, and (iii) the original distal tube orifice is positioned outside of the guide lumen;
 - (c) advancing fluid into the body of the patient through the guide catheter and the original tube segment after step (b);
 - (d) removing the original tube segment from the guide catheter after the original tube segment becomes dysfunctional;
 - (e) positioning the replacement tube segment within the guide catheter after step (d) so that (i) the replacement tube segment extends through the distal guide orifice, (ii) the replacement proximal tube orifice is positioned within the guide lumen, and (iii) the replacement distal tube orifice is positioned outside of the guide lumen; and
 - (f) advancing fluid into the body of the patient through the guide catheter and the replacement tube segment after step (e).

40. (New) A catheter system, comprising:
a guide catheter having a distal guide orifice, a proximal guide orifice, and
a guide lumen extending therebetween; and
an insert assembly at least partially positioned within said guide catheter,
said insert assembly including (i) a tube segment having a proximal tube orifice
located in said guide lumen, and a distal tube orifice located outside of said
guide lumen, and (ii) a pusher attached to said tube segment,
wherein movement of said pusher causes movement of said tube
segment.

41. (New) The catheter system of claim 40, further comprising a closure
member attached to said pusher, said closure member configured to couple to
said guide catheter.

42. (New) The catheter system of claim 40, wherein said pusher includes
an elongated plastic member secured to said tube segment.

43. (New) The catheter system of claim 40, wherein said pusher includes
a metal wire having a distal end secured to said tube segment.

44. (New) The catheter system of claim 41, wherein said pusher includes:

a swivel,
an upper pusher portion interposed between said closure member and said swivel, and
a lower pusher portion interposed between said swivel and said tube segment.

45. (New) The catheter system of claim 40, wherein:
said guide catheter includes a sideport branch which defines a sideport lumen, and
said pusher is positioned within said sideport lumen and said guide lumen.

46. (New) A catheter system, comprising:
a guide catheter having a distal guide orifice, a proximal guide orifice, and a guide lumen extending therebetween; and
an inner conduit having (i) a proximal conduit orifice located in said guide lumen, (ii) a distal conduit orifice located outside of said guide lumen, and (ii) a conduit lumen extending between said proximal conduit orifice and said distal conduit orifice.

47. (New) The catheter system of claim 46, further comprising a pusher attached to said conduit, wherein movement of said pusher causes movement of said inner conduit.

48. (New) The catheter system of claim 47, further comprising a closure member attached to said pusher, said closure member being configured to couple to said guide catheter.

49. (New) The catheter system of claim 47, wherein said pusher includes an elongate plastic member having a distal end secured to said tube segment.

50. (New) The catheter system of claim 47, wherein said pusher includes a metal wire having a distal end secured to said tube segment.

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51. (New) The catheter system of claim 48, wherein said pusher includes:

- a swivel,
- an upper pusher portion interposed between said closure member and said swivel, and
- a lower pusher portion interposed between said swivel and said tube segment.

52. (New) The catheter system of claim 47, wherein:

- said guide catheter includes a sideport branch which defines a sideport lumen, and
- said pusher is positioned within said sideport lumen and said guide lumen.
